

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	(2)	("5726133" "6191081").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2006/01/13 18:41
S2	(2)	("6140282" "5569405").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2006/01/13 18:41
S4	(13)	(lubricant lubrication lubricating oil) and (zinc "Zn") adj di\$14dithiocarbamate\$1 and (\$16thiocarbamoyl\$21 (sulfur NEAR3 \$16thiocarbamate\$1) antioxidant anti adj oxidant)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/29 10:38
S5	1098	(508/363,364,365,371-378,443,444). ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/29 11:01
S6	(66)	(508/110-444).ccls. and (zinc "Zn") adj di\$14dithiocarbamate\$1 and (antioxidant anti adj oxidant ) SAME (\$16thiocarbamoyl\$21 (sulfur NEAR3 \$16thiocarbamate\$1) phenol catechol resorcinol hydroquinone naphthol biphenol bi adj phenol phenolic) and (zinc "Zn") adj di\$14dithiophosphate\$1	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/29 11:10

STN search  
reviewed circled results, page 4.

THEXTON 10/666,350

Page 1

=> file reg

FILE 'REGISTRY'

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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FILE 'HCA'

L1 340433 SEA (LUBRIC? OR LUBE# OR GREAS? OR ANTIFRIC? OR ANTIWEAR?  
OR ANTICORRO? OR ANTIRUST? OR ANTIOXID? OR ANTI(W) (FRIC?  
OR WEAR? OR CORRO? OR RUST? OR OXID?) OR SLICK? OR  
SLIPP? OR OLEAGINOUS?)  
L2 25145 SEA ((GEAR? OR ENGINE# OR CRANKCASE? OR MOTOR# OR  
TRANSMISSION? OR HYDRAUL? OR MACHINE? OR (2 OR 4 OR TWO  
OR FOUR) (W) (CYCLE# OR STROKE#)) (2A) (FLUID# OR OIL#))  
L3 426575 SEA (SURFACT? OR BIOSURFACT? OR HYDROTROP? OR DETERG? OR  
ABSTERG? OR (SURFACE(W)ACTIVE# OR WETTING#) (A) (AGENT? OR  
ADDITIVE? OR COMPOUND? OR COMPD# OR CMPD# OR CPD#) OR  
EMULSIFIER? OR DISPERSANT? OR SOAP?)  
L4 14544 SEA ?PHENOL?(3A) (ANTI(A)OXID? OR ANTIOXID?)

FILE 'REGISTRY'

L5 1 SEA "ZINC DIMETHYL DITHIOPHOSPHATE"/CN  
E ZINC DIETHYL DITHIOPHOSPHATE/CN  
L6 1 SEA "ZINC DIETHYL DITHIOPHOSPHATE"/CN  
E ZINC DIPROPYL DITHIOPHOSPHATE/CN  
L7 1 SEA "ZINC DIPROPYL PHOSPHORODITHIOATE"/CN  
E ZINC DIBUTYL DITHIOPHOSPHATE/CN  
L8 1 SEA "ZINC DIBUTYL DITHIOPHOSPHATE"/CN  
L9 4 SEA (L5 OR L6 OR L7 OR L8)

FILE 'HCA'

L11 1942 SEA L9 OR (ZINC# OR ZN) (2A) (DIALKYLDITHIOPHOSPHATE# OR  
DIMETHYLDITHIOPHOSPHATE# OR DIETHYLDITHIOPHOSPHATE# OR  
DIPROPYLDITHIOPHOSPHATE# OR DIBUTYLDITHIOPHOSPHATE# OR  
(DIMETHYL OR DIETHYL OR DIPROPYL OR DIBUTYL OR DIALKYL  
OR DI(A) (ME OR ET OR PR OR BU OR ALKYL)) (2A) DITHIOPHOSPHA  
TE#)

FILE 'REGISTRY'

L12 1 SEA "ZINC DIMETHYLDITHIOCARBAMATE"/CN  
E ZINC DIETHYLDITHIOCARBAMATE/CN

L13 1 SEA "ZINC DIETHYLDITHIOCARBAMATE"/CN  
 E ZINC DIPROPYLDITHIOCARBAMATE/CN  
 L14 1 SEA "ZINC DIPROPYLDITHIOCARBAMATE"/CN  
 E ZINC DIBUTYLDITHIOCARBAMATE/CN  
 L15 1 SEA "ZINC DIBUTYLDITHIOCARBAMATE"/CN  
 L16 4 SEA (L12 OR L13 OR L14 OR L15)

FILE 'HCA'

L18 4255 SEA L16 OR (ZINC# OR ZN) (2A) (DIALKYLDITHIOCARBAMATE# OR  
 DIMETHYLDITHIOCARBAMATE# OR DIETHYLDITHIOCARBAMATE# OR  
 DIPROPYLDITHIOCARBAMATE# OR DIBUTYLDITHIOCARBAMATE# OR  
 (DIMETHYL OR DIETHYL OR DIPROPYL OR DIBUTYL OR DIALKYL  
 OR DI (A) (ME OR ET OR PR OR BU OR ALKYL)) (2A) DITHIOCARBAMA  
 TE#)

FILE 'LREGISTRY'

L19 STR

FILE 'REGISTRY'

L20 0 SEA SSS SAM L19

FILE 'LREGISTRY'

L21 STR L19

FILE 'REGISTRY'

L22 26 SEA SSS SAM L21  
 L23 526 SEA SSS FUL L21  
 SAV L23 THE350/A  
 L24 0 SEA SUB=L23 SSS SAM L19  
 L25 61 SEA SUB=L23 SSS FUL L19  
 SAV L25 THE350A/A

FILE 'HCA'

L26 589 SEA L25

FILE 'REGISTRY'

L27 8 SEA L25 AND 1<NC

FILE 'HCA'

L28 156 SEA L26 AND (L1 OR L2)  
 L29 27 SEA L28 AND L3  
 L30 1 SEA L29 AND (OVER(A)BASE? OR OVERBASE?)  
 L31 7 SEA L28 AND L11  
 L32 24 SEA L28 AND L18  
 L33 18 SEA L28 AND L4  
 L34 14544 SEA L4 AND (L1 OR L2)  
 L35 705 SEA L34 AND L3  
 L36 1 SEA L29 AND (OVER(A)BASE? OR OVERBASE?)

L37 80 SEA L34 AND L11  
 L38 93 SEA L34 AND L18  
 L39 1 SEA L35 AND L37 AND L38  
 L40 37 SEA L35 AND L37  
 L41 12 SEA L35 AND L38  
 L42 7 SEA L37 AND L38  
 L43 0 SEA L40 AND L26  
 L44 0 SEA L40 AND L29  
 L45 0 SEA L40 AND L32  
 L46 1 SEA L40 AND L41  
 L47 48 SEA L3 AND (L11 OR L18) AND L4  
 L48 48 SEA L47 AND (L1 OR L2)  
 L49 0 SEA L48 AND L26  
 L50 10 SEA L3 AND (L11 OR L18) AND L26  
 L51 7 SEA L50 AND (L1 OR L2)  
 L52 3 SEA L50 NOT L51  
 L53 48 SEA (L1 OR L2) AND L3 AND (L11 OR L18) AND L4  
 L54 1 SEA (L1 OR L2) AND L3 AND (L11 AND L18) AND L4  
 L55 156 SEA (L1 OR L2) AND L26  
 L56 28 SEA L55 AND (L11 OR L18)  
 L57 7 SEA L56 AND L3  
 L58 3 SEA L56 AND L4  
 L59 3 SEA L55 AND (L11 AND L18)  
 L60 14544 SEA (L1 OR L2) AND L4  
 L61 705 SEA L60 AND L3  
 L62 166 SEA L60 AND (L11 OR L18)  
 L63 7 SEA L60 AND (L11 AND L18)  
 L64 48 SEA L61 AND L62  
 L65 2 SEA L61 AND L26  
 L66 3 SEA L62 AND L26  
 L67 2240 SEA (L1 OR L2) AND (L11 OR L18)  
 L68 166 SEA L67 AND L4  
 L69 28 SEA L67 AND L26  
 L70 51 SEA (L1 OR L2) AND (L11 AND L18)  
 L71 7 SEA L70 AND L4  
 L72 3 SEA L70 AND L26  
 L73 18 SEA L30 OR L31 OR L36 OR L39 OR L42 OR L46 OR L51 OR L54  
 OR L57 OR L58 OR L59 OR L63 OR L65 OR L66 OR L71 OR L72  
 L74 24 SEA (L33 OR L41) NOT L73  
 L75 35 SEA (L29 OR L32 OR L56 OR L69) NOT (L73 OR L74)

## FILE 'REGISTRY'

L76 465 SEA L23 NOT L25

## FILE 'HCA'

L77 10927 SEA L76  
 L78 37 SEA L77 AND (L1 OR L2) AND L3  
 L79 9 SEA L78 AND (L11 OR L18)

L80 1 SEA L77 AND (L1 OR L2) AND L11 AND L18  
 L81 106 SEA L77 AND (L1 OR L2) AND (L11 OR L18)  
 L82 9 SEA L81 AND L3  
 L83 17 SEA L81 AND L4  
 L84 20 SEA (L79 OR L80 OR L82 OR L83) NOT (L73 OR L74 OR L75)  
 L85 17 SEA L73 AND (1840-2002/PY OR 1840-2002/PRY)  
 L86 23 SEA L74 AND (1840-2002/PY OR 1840-2002/PRY)  
 L87 34 SEA L75 AND (1840-2002/PY OR 1840-2002/PRY)  
 L88 20 SEA L84 AND (1840-2002/PY OR 1840-2002/PRY)

## FILE 'LCA'

L89 736 SEA (LUBRIC? OR LUBE# OR GREAS? OR ANTIFRIC? OR ANTIWEAR?  
 OR ANTICORRO? OR ANTIRUST? OR ANTIOXID? OR ANTI(W) (FRIC?  
 OR WEAR? OR CORRO? OR RUST? OR OXID?) OR SLICK? OR  
 SLIPP? OR OLEAGINOUS?)  
 L90 555 SEA (LUBRIC? OR LUBE# OR GREAS? OR ANTIFRIC? OR ANTIWEAR?  
 OR ANTICORRO? OR ANTIRUST? OR ANTI(W) (FRIC? OR WEAR? OR  
 CORRO? OR RUST?) OR SLICK? OR SLIPP? OR OLEAGINOUS?)  
 L91 67 SEA ((GEAR? OR ENGINE# OR CRANKCASE? OR MOTOR# OR  
 TRANSMISSION? OR HYDRAUL? OR MACHINE? OR (2 OR 4 OR TWO  
 OR FOUR) (W) (CYCLE# OR STROKE#)) (2A) (FLUID# OR OIL#))

## FILE 'HCA'

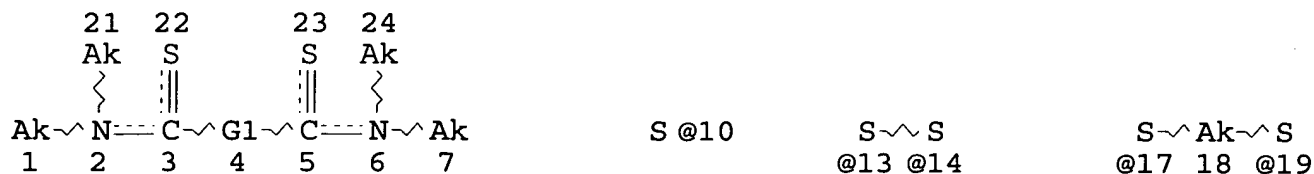
L92 224046 SEA L90 OR L91  
 L93 15 SEA L85 AND L92  
 L94 11 SEA L86 AND L92  
 L95 23 SEA L87 AND L92  
 L96 4 SEA L88 AND L92  
 L97 108 SEA L26 AND L92  
 L98 14 SEA L97 AND L4  
 L99 13 SEA L97 AND L18  
 L100 6 SEA L97 AND L11  
 L101 26 SEA L97 AND L3  
 L102 1 SEA (L98 OR L99 OR L100 OR L101) NOT (L93 OR L94 OR L95)  
 L103 0 SEA L102 AND (1840-2002/PY OR 1840-2002/PRY)  
 L104 145 SEA L77 AND L92  
 L105 20 SEA L104 AND L3  
 L106 0 SEA L104 AND L11  
 L107 25 SEA L104 AND L18  
 L108 4 SEA L104 AND L4  
 L109 5 SEA L105 AND L107  
 L110 7 SEA (L108 OR L109 OR L96) NOT (L93 OR L94 OR L95)  
 L111 7 SEA L110 AND (1840-2002/PY OR 1840-2002/PRY)

## FILE 'REGISTRY'

=> d 125 que stat

L19

STR



VAR G1=10/13-3 14-5/17-3 19-5

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 1  
 CONNECT IS E1 RC AT 7  
 CONNECT IS E2 RC AT 10  
 CONNECT IS E2 RC AT 13  
 CONNECT IS E2 RC AT 14  
 CONNECT IS E2 RC AT 17  
 CONNECT IS E2 RC AT 18  
 CONNECT IS E2 RC AT 19  
 CONNECT IS E1 RC AT 21  
 CONNECT IS E1 RC AT 24

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 1  
 GGCAT IS SAT AT 7  
 GGCAT IS SAT AT 18  
 GGCAT IS SAT AT 21  
 GGCAT IS SAT AT 24

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M3-X30 C AT 1  
 ECOUNT IS M3-X30 C AT 7  
 ECOUNT IS M3-X30 C AT 21  
 ECOUNT IS M3-X30 C AT 24

GRAPH ATTRIBUTES:

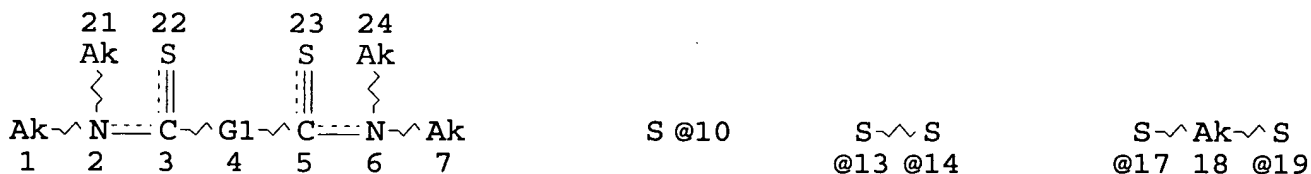
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L21

STR



VAR G1=10/13-3 14-5/17-3 19-5

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 1

CONNECT IS E1 RC AT 7  
CONNECT IS E2 RC AT 10  
CONNECT IS E2 RC AT 13  
CONNECT IS E2 RC AT 14  
CONNECT IS E2 RC AT 17  
CONNECT IS E2 RC AT 18  
CONNECT IS E2 RC AT 19  
CONNECT IS E1 RC AT 21  
CONNECT IS E1 RC AT 24  
DEFAULT MLEVEL IS ATOM  
GGCAT IS SAT AT 1  
GGCAT IS SAT AT 7  
GGCAT IS SAT AT 18  
GGCAT IS SAT AT 21  
GGCAT IS SAT AT 24  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE  
L23 526 SEA FILE=REGISTRY SSS FUL L21  
L25 61 SEA FILE=REGISTRY SUB=L23 SSS FUL L19

100.0% PROCESSED 526 ITERATIONS  
SEARCH TIME: 00.00.01

61 ANSWERS

=> file hca  
FILE 'HCA'  
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=> d 193 1-15 cbib abs hitstr hitind

L93 ANSWER 1 OF 15 HCA COPYRIGHT 2006 ACS on STN  
142:8976 **Overbased borated lubricating oil ashless  
dispersants, detergents, and antioxidants**  
for low-phosphorus oils with extended drain intervals. Roby,  
Stephen H.; Mayer, Richard J.; Ruelas, Susanne G. (Chevron Oronite  
Company LLC, USA). U.S. Pat. Appl. Publ. US 2004242433 A1 20041202,  
15 pp., Cont.-in-part of U.S. Ser. No. 285,753, abandoned.  
(English). CODEN: USXXCO. APPLICATION: US 2004-833562 20040428.